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Wisconsin
Department of Commerce

SAFETY AND BUILDINGS DIVISION
Plumbing Product Review
P.O. Box 2658
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TTY: Contact Through Relay

Jim Doyle, Governor
Richard J. Leinenkugel, Secretary

October 16, 2008

ACCESS BUSINESS GROUP
(FORMERLY AMWAY CORP.)
STEPHEN VER STRAT
7575 FULTON ST EAST
ADA MI 49355

Re: Description: WATER TREATMENT DEVICE - ACTIVATED CARBON/ULTRA VIOLET
Manufacturer: ACCESS BUSINESS GROUP
Product Name: eSPRING WATER PURIFIER
Model Number(s): 10-0185 USING THE 10-0186 CARTRIDGE
Product File No: 20070465

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of October 2013.

This approval supersedes the approval issued on October 22, 2002 under product file number 20020350.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturers published instructions.

- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.

- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

- These devices will only reduce the concentration of volatile organic chemicals at water outlets that are served by the devices. There are dermal (skin) absorption and inhalation exposure risks associated with volatile organic chemicals. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to volatile organic chemicals will remain possible at unprotected outlets, particularly hot water outlets (e.g. bathing, showering, clothes washing or dish washing).

  If, by way of reputable water analyses, a water supply is known to contain unsafe levels of volatile organic chemicals, then all the water entering the residence must be treated at the point-of-entry using an approved water treatment device to address all potential routes of exposure.

- Do not use this device with water that is microbiologically unsafe, or of unknown quality, without adequate point-of-entry (i.e. whole house) disinfection before this device.

- These devices will only reduce the concentration of cysts/oocysts at water outlets that are served by the devices. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to cysts/oocysts will remain possible at unprotected outlets.

  The presence of cysts/oocysts strongly suggests that other pathogens (e.g. bacteria, virus) may also be present.

  If, by way of reputable water analyses, a water supply is known to contain cysts/oocysts, then all the water entering the residence must be treated at the point-of-entry, using an approved water treatment device, to address all potential routes of exposure thereby providing a biologically safe water supply.

- This device is not intended for the treatment of water that has an obvious or intentional contamination source (e.g. a well known to be microbiologically unsafe, raw sewage), nor is this device intended to convert wastewater to drinking water.

- If the treatment components of this device (e.g. replacement cartridge) are replaced with anything other than those originally approved for use with this device, then this approval shall immediately be considered null and void.

Based on testing data submitted to and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants as specified on pages 1 through 6 of this letter.

AESTHETIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070465
TABLE 1 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Capacity: 4,997 Liters (L) [1,320 gallons (gals.)] for free chlorine reduction. For particulate reduction, the capacity is dependent on the type and quantity of particulate matter present in the untreated water; the need for maintenance may be indicated by a significant decrease in flow rate.

Tested Contaminant	Influent Challenge (mg/L)*, [1]
Chlorine (free)	2.0 ± 10%
Particulates (0.5 to < 1.0 µm)	≥ 1.0 x 10^4 #/mL

Other Conditions: the contaminant reduction performance capabilities displayed for Table 1 of 6 were verified by testing conducted in accordance with NSF *International* Standard 42. To qualify for free chlorine reduction, the device must reduce the influent challenge concentrations by ≥ 50%. To qualify for particulate reduction, Class I, the device must reduce the influent challenge concentrations by ≥ 85%.

1 = milligrams per liter (mg/L) are equivalent to parts per million (ppm)
#/mL = particles per milliliter
≥ = greater than or equal to
± = plus or minus
***** = unless otherwise specified
< = less than
µm = micrometers

HEALTH EFFECTING INORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070465
TABLE 2 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Capacity: 4,997 Liters (L) [1,320 gallons (gals.)]. For asbestos reduction, the capacity is dependent on the type and quantity of particulate matter present in the untreated water; the need for maintenance may be indicated by a significant decrease in flow rate.

Tested Contaminant	Influent Challenge Concentration (mg/L*)[1]	Max. Permissible Effluent Concentration (mg/L*)[1]
Asbestos fibers (> 10 µm in length)	1.0×10^7 to 1.0×10^8	≤ 1.0% of challenge
Lead (Pb^{+2}) [2]	0.15 ± 10%	0.010
Mercury (Hg^{+2}) [2]	0.006 ± 10%	0.002

Other Conditions: the contaminant reduction performance capabilities displayed for Table 2 of 6 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for a specific contaminant reduction claim, the system shall reduce the influent challenge concentrations such that all effluent concentrations are ≤ the maximum permissible effluent concentrations shown in table 2 of 6.

1 = milligrams per liter (mg/L) are equivalent to parts per million (ppm)
2 = metals are tested at pH 6.5 and pH 8.5
***** = unless otherwise specified
≤ = less than or equal to
± = plus or minus
> = greater than
F/L = fibers per liter

HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES VIA CHLOROFORM SURROGATE
PRODUCT FILE NUMBER 20070465
TABLE 3 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Capacity: 4,997 Liters (L) [1,320 gallons (gals.)].

Tested Contaminant	Influent Challenge (µg/L)[1]
Alachlor	50
Atrazine	100
Benzene	81
Carbofuran	190
Carbon tetrachloride	78
Chlorobenzene	77
Chloropicrin	15
2,4-D	110
Dibromochloropropane (DBCP)	52
o-Dichlorobenzene	80
p-Dichlorobenzene	40
1,2-Dichloroethane	88
1,1-Dichloroethylene	83
cis-1,2-Dichloroethylene	170
trans-1,2-Dichloroethylene	86
1,2-Dichloropropane	80
cis-1,3-Dichloropropylene	79
Dinoseb	170
Endrin	53
Ethylbenzene	88
Ethylene dibromide (EDB)	44
Haloacetonitriles (HAN):	-
Bromochloroacetonitrile	22
Dibromoacetonitrile	24
Dichloroacetonitrile	9.6
Trichloroacetonitrile	15

HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES VIA CHLOROFORM SURROGATE PRODUCT FILE NUMBER 20070465 TABLE 3 OF 6 (continued)

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Capacity: 4,997 Liters (L) [1,320 gallons (gals.)].

Tested Contaminant	Influent Challenge (µg/L)[1]
Haloketones (HK):	-
1,1-Dichloro-2-propanone	7.2
1,1,1-Trichloro-2-propanone	8.2
Heptachlor	25
Heptachlor epoxide	10.7
Hexachlorobutadiene	44
Hexachlorocyclopentadiene	60
Lindane	55
Methoxychlor	50
Pentachlorophenol	96
Simazine	120
Styrene	150
1,1,2,2-Tetrachloroethane	81
Tetrachloroethylene	81
Toluene	78
2,4,5-TP (silvex)	270
Tribromoacetic acid	42
1,2,4-Trichlorobenzene	160
1,1,1-Trichloroethane	84
1,1,2-Trichloroethane	150
Trichloroethylene	180
Trihalomethanes **(chloroform surrogate)**	300
Xylenes (total)	70

Other Conditions: the contaminant reduction performance capabilities displayed for Table 3 of 6 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for the reduction of the organic contaminants listed above, the device must reduce the influent challenge concentration of chloroform at 300 µg/L ± 10% at each sample point by ≥ 95%.

1 = micrograms per liter (µg/L) are equivalent to parts per billion (ppb)
≥ = greater than or equal to

HEALTH EFFECTING ORGANIC CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20070465
TABLE 4 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Capacity: 4,997 Liters (L) [1,320 gallons (gals.)]

Tested Contaminant	Influent Challenge Concentration (µg/L*)[1]	Max. Permissible Effluent Concentration (µg/L*)[1]
Alachlor	40.0 ± 10%	2.0
Atrazine	9.0 ± 10%	3.0
Chlordane	40.0 ± 10%	2.0
Dibromochloropropane	4.0 ± 10%	0.2
Ethylene dibromide	1.0 ± 10%	0.05
Heptachlor epoxide	4.0 ± 10%	0.2
Lindane	2.0 ± 10%	0.2
Methyl *tert*-butyl ether (MtBE)	15.0 ± 20%	5.0
Methoxychlor	120 ± 10%	40
Polychlorinated biphenyls (PCBs)[3]	10.0 ± 10%	0.5
Toxaphene	15.0 ± 10%	3.0
Total Trihalomethanes (TTHMs)[4]	450 ± 20%	80
2,4-D (2,4-dichlorophenoxyacetic acid)	210 ± 10%	70
2,4,5-TP (Silvex)	150 ± 10%	50

Other Conditions: the contaminant reduction performance capabilities displayed for Table 4 of 6 were verified by testing conducted in accordance with NSF *International* Standard 53. To qualify for a specific contaminant reduction claim, the system shall reduce the influent challenge concentrations such that all effluent concentrations are ≤ the maximum permissible effluent concentrations shown in table 4 of 6.

1 = micrograms per liter (µg/L) are equivalent to parts per million (ppm)
***** = unless otherwise specified
± = plus or minus
F/L = fibers per liter
4 = as chloroform
2 = metals are tested at pH 6.5 and pH 8.5
≤ = less than or equal to
> = greater than
3 = Aroclor 1260

AESTHETIC BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20010224
TABLE 5 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Maintenance interval: 4,997 Liters (L) [1,320 gallons (gals.)] or one year, whichever occurs first

Tested Contaminant	Influent Challenge (cells/mL)
Saccharomyces cerevisiae (ATCC# 18824)	$1.0 \times 10^4 - 1.0 \times 10^5$

Other Conditions: the contaminant reduction performance capabilities displayed for Table 5 of 6 were verified by testing conducted in accordance with NSF *International* Standard 55. To qualify for "Class B" microbial reduction performance the device must cause the geometric mean of all S. cerevisiae counts on influent samples minus the geometric mean of counts on all effluent samples shall demonstrate that a log reduction ≥ than the reduction caused by a dose of 16 mJ/cm^2 was achieved as calibrated in annex B of NSF Standard 55.

cells/mL = cells per milliliter
mJ/cm² = millijoules per square centimeter
≥ = greater than or equal to

HEALTH EFFECTING BIOLOGICAL CONTAMINANT REDUCTION CAPABILITIES
PRODUCT FILE NUMBER 20010224
TABLE 6 OF 6

Flow Rate: 3.4 Liters per minute (Lpm) [0.9 gallon per minute (gpm)]
Maintenance interval: 4,997 Liters (L) [1,320 gallons (gals.)] or one year, whichever occurs first

Tested Contaminant	Influent Challenge	Log_{10} Inactivation (reduction %)
Cryptosporidium parvum (NSF)	1.25×10^5 counts per mL	> 3.0 (> 99.9%)
Klebsiella terrigena (ATCC 33257)	1.82×10^7 cfu/100 mL	> 6.0 (> 99.9999%)
Poliovirus Lsc1 (ATCC VR-59)	4.97×10^8 pfu/L	> 4.0 (> 99.99%)
Rotavirus SA-11 (ATCC VR-899)	3.03×10^7 pfu/L	> 4.0 (> 99.99%)
MS-2 Coliphage (ATCC 15997-B1)	1.60×10^5 pfu/mL	> 3.0 (>99.9%)

Other Conditions: the contaminant reduction performance capabilities displayed for Table 6 of 6 were verified by testing conducted in accordance with U.S. Environmental Protection Agency's Task Force Report, *Guide Standard and Protocol for Testing Microbiological Water Purifiers* (Federal Register, May 26, 1986). The testing was performed by NSF *International*, or under the direct auspices of NSF *International*. New lamps, and lamps that had been pre-aged to 150% of their rated service life, were evaluated for all tests. These devices are approved for treating microbiologically unsafe water, however these devices are not intended for treating water that has an obvious contamination source, such as raw sewage; nor are these devices intended to convert wastewater to microbiologically safe drinking water.

In addition to the microbiological testing, the UV dose being supplied by these devices was also evaluated using MS-2 bacteriophage as a biological actinometer. These devices caused a log reduction greater than the reduction caused by an average UV dose of 42 mJ/cm^2.

It is important to know that treating microbiologically unsafe water at a single, or multiple, points of use may leave other potential routes of exposure unprotected (e.g. bathing, showering, wall hydrants).

counts per mL = counts per milliliter
pfu/L = plaque forming units per liter
mJ/cm² = millijoules per square centimeter
cfu/100 mL = colony forming units per 100 mL
> = greater than

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation that may result from its use.

Sincerely,

Glen W. Schlueter
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